

New Hampshire Bureau of Radiological Health

Radiation Machine Inspection Checklist

This list is intended to cover the items most likely to be reviewed during routine inspections. It cannot mention every item an inspector may wish to see. Requirements related to the machines themselves are not given. Complete requirements may be found in applicable portions of the New Hampshire Rules for the Control of Radiation. If you have questions, please call us (603-271-4588).

Items in square brackets [] are references that establish a requirement or have a bearing on it.

All sites

- ___ Radiation protection program. [He-P 4020.04]
- ___ Caution signs, if applicable.
[He-P 4022.12 and 4022.13(d)]
- ___ Labels on machines. [He-P 4022.14 (and 4046.01(b) for healing arts machines)]

- Postings per He-P 4019.03(b) or (c) of:
 - ___ Parts He-P 4019 through 4022 of the Rules;
 - ___ Current registration certificate; and
 - ___ Procedures for activities under the registration;or
 - ___ Notice describing any or all of the above three and where they may be examined, if posting is not practicable.
- ___ Form 5, "Notice to Employees."
[He-P 4019.03(d)]

- Records of:
 - ___ Receipt, transfer, and disposal of radiation machines. [He-P 4001.03]
 - ___ Radiation protection program reviews.
[He-P 4021.02(b)]
 - ___ Surveys (= evaluations) of radiation conditions.
[He-P 4022.01 and 4021.03]
 - ___ Prior occupational dose (if applicable).
[He-P 4020.09 and 4021.05]
 - ___ Individual monitoring, e.g., film badge results, if applicable. [He-P 4022.02(b), 4020.11, 4020.12, and 4021.07]
 - ___ Doses to individual members of the public.
[He-P 4020.13, 4020.14, and 4021.08]
 - ___ Shielding evaluations for new and modified facilities. [He-P 4040.04]

Diagnostic Healing Arts

- ___ Technique charts for each machine.
[He-P 4045.03(d)]
- ___ Written safety procedures.
[He-P 4045.0(d) and 4045.03(l)]
- ___ Holding devices, if applicable.
[He-P 4045.03(l)]
- ___ Gonadal shielding.
[He-P 4045.03(h)]

- ___ Film and cassette information, if applicable.
[He-P 4045.03(m)]
- ___ Information and maintenance records.
[He-P 4045.05]
- ___ Film processing equipment, facilities and supplies.
[He-P 4045.07(a), (b), and (c)]
- ___ Darkroom access control, if applicable.
[He-P 4045.07(c)(6)]
- ___ Records of periodic fluoroscopic exposure rate determinations. [He-P 4046.04(h)]
- ___ Records of CT surveys, calibrations, spot checks, and operating procedures. [He-P 4046.12]

Cabinet Radiographic

- It is important to differentiate between cabinet radiographic and analytical machines.
- ___ Operating procedures for each unit.
[He-P 4034.04(a)(1)]
 - ___ Records of semi-annual tests of interlocks.
[He-P 4034.04(a)(2)]
 - ___ Records of annual evaluation of compliance with He-P 4020.13(a) through (f) and 21 CFR 1020.40.
[He-P 4034.04(a)(3)]
- (For non-cabinet radiographic machines, review the requirements of Part He-P 4034 except Section He-P 4034.04.)

Analytical

- ___ "X-Ray On" light and label. [He-P 4043.04(e)]
- ___ Warning device purpose labels. [He-P 4043.04(i)]
- ___ Warning signs per He-P 4043.004(l).
- ___ Records of surveys at installation, annually thereafter, and after modification, servicing, etc.
[He-P 4043.05(c)]
- ___ Normal operating procedures. [He-P 4043.06]
- ___ Records of approvals to bypass safety devices, if any. [He-P 4043.06(d)]
- ___ Personnel monitoring (dosimetry) records, if dosimetry required. [He-P 4043.07(b) and/or (c)]

(Accelerators and therapy machines on the back.)

Accelerators

- ___ Records of training and experience of particle accelerator supervisors. [He-P 4044.04(a)]
- ___ Records of radiation safety committee appointments, makeup, and training and of proposals for human use, if applicable. [He-P 4044.05]
- ___ Normal and emergency operating procedures. [He-P 4044.06 and 4044.10(f)]
- ___ Records of shielding design and of installation survey. [He-P 4044.07]
- ___ Records of quarterly interlock checks. [He-P 4044.10(c)]
- ___ Electrical circuit diagrams of accelerator and interlocks. [He-P 4044.10(d)]
- ___ Records of interlock bypass. [He-P 4044.10(e)]
- ___ Records of calibration and daily checks. [He-P 4044.11(a) and (h)]
- ___ Records of changes in shielding, operation, equipment, or occupancy and of surveys. [He-P 4044.11(b)]
- ___ Records of periodic surveys for airborne particulate radioactivity, if applicable. [He-P 4044.11(e) and (h)]
- ___ Records of periodic smear surveys for radioactive contamination, if applicable. [He-P 4044.11(f) and (h)]
- ___ Records of area surveys. [He-P 4044.11(g) and (h)]
- ___ Records of releases of radioactive material to unrestricted areas. [He-P 4044.12]

Therapy

- ___ Records of authorized user training and experience per He-P 4047.04(e).
- ___ Records of therapy physicist training and experience per He-P 4047.04(f).
- ___ Records of machine operator training and experience per He-P 4047.11(g).
- ___ Records of current and former operators. [He-P 4047.04(h) and (i)]
- ___ Written safety procedures. [He-P 4047.04(k) and (l)]
- ___ Records on visiting authorized users. [He-P 4047.04(o)]
- ___ Records maintained pursuant to He-P 4047.04(s).

(The above are only some of the items that may be reviewed. Part He-P 4047 contains extensive requirements for measurements, record keeping, and documentation. See Sections He-P 4047.05 et seq.)